



Prairie Update

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Corral Relocation Protects Groundwater

When Geoff Rutledge and his family bought property alongside Moosomin Reservoir in southeast Saskatchewan, he knew even before they moved in that he wanted to make some changes. One of them was to move the corrals away from his water well.

"For me, personally, we have to be concerned with our water. Without that we don't have anything," says Rutledge.

The issue with the existing corrals was that they were located almost immediately adjacent to the yard's water well, where nutrient-rich runoff from the corrals could easily reach. The well could provide a direct pathway for contaminated runoff to reach the aquifer below, potentially making the water unusable for people or livestock.

Either the well or the corrals would need to be moved. But while the well was old – somewhere between 90 and 100 years old, in fact – it was still an excellent water source, with considerable yield and outstanding water quality. Naturally, Rutledge was eager to keep using it, and to protect it.

So he decided to relocate the corrals to a site further away from the well. His decision was made easier by the fact that a yard fire before he took ownership had damaged the existing corrals.

"For me, it was a good opportunity to set things up the way that I wanted them," says Rutledge.

"So I moved the corrals just about 1,400 feet to the east, up onto a little bit of a clay knob."



Geoff Rutledge with his new corral system.

Building the new corrals the way he wanted turned out to be a big undertaking, requiring a sizeable investment of both time and money. He started by pounding in 5½" steel posts, then used 2½" pipe for the cross-rails, each of which were saddle-cut and custom fit to the posts. Finally, each panel was finished with ½" pipe that was sleeved onto sucker rods.

The majority of the construction was completed in 2005. In 2006, Rutledge applied for financial assistance to continue building through his Environmental Farm Plan, which he had completed in 2004.

Producers who complete an Environmental Farm Plan are eligible for 50 percent cost-sharing for the relocation of livestock confinement facilities such as corrals, up to a maximum of \$30,000. The funding is made available through the Canada-Saskatchewan Farm Stewardship Program, an initiative to help Saskatchewan producers address on-farm environmental risks which concludes in March 2008.

Rutledge believes that a fundamental change is coming for the cattle industry, and producers will have to change their practices to keep the industry sustainable.

"The cattle industry has got to be one of the few industries left in the world where you still hear the comment, 'Well that's the way my grandfather did it, so that's the way I'm going to do it.' But the world's a little different than it was when your grandfather was around. Look at the changes in technology in grain farming, or house building, or vehicles, and so on," says Rutledge.

"I think there's going to come a day when the idea of grazing along the side of the creek or allowing cattle to wallow in the lake are probably going to come to an end. And I think it's important that as producers we start to look forward and make the changes to make our operations more efficient and easier on the land."



Each piece of the corrals was custom cut and mounted.

What's New . . .

Take a look at some of the upcoming events and new projects and programs available from the Saskatchewan Watershed Authority and our partner agencies . . .

Hextalls Win Pipestone Creek Watershed Stewardship Award

Jack and Kim Hextall were chosen to receive the Pipestone Creek Watershed Stewardship Committee's annual Stewardship Award for 2007. The award recognizes residents of the watershed who have made an effort to be good stewards of water resources.



John Van Eaton (left), chairman of the Pipestone Watershed Stewardship Committee, presents Jack and Kim Hextall with the Committee's annual Stewardship Award.

The Hextalls farm south of Grenfell, next to the Pipestone Creek. After completing an Environmental Farm Plan for their operation, the Hextalls decided to install a berm to contain runoff from their corrals and re-direct it into two nearby holding ponds, rather than allowing it to flow into the creek. They have also installed some crossfencing and remote watering on their land, and are active promoters of good stewardship practices in their watershed.

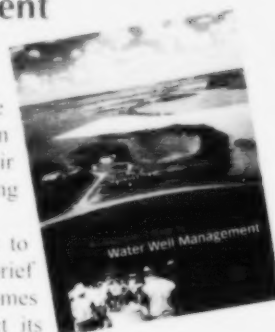
The Pipestone Creek Watershed Stewardship Committee is part of the Lower Souris Watershed Committee, the group working to implement the Lower Souris River Watershed Source Water Protection Plan. For more information on the Lower Souris Watershed Committee and its membership, please visit www.lowersourisriverwatershed.com.

Water Well Management Guide Published

A new book is providing private water well owners in Saskatchewan with valuable information on their groundwater resources and managing their wells.

The book, "A Landowner's Guide to Water Well Management," provides a brief overview of where groundwater comes from and the factors that can affect its quality and availability. It also details how different types of wells are constructed and readied for service, how to keep a well working properly and protect the water from contamination, and how to decommission a well once it is no longer in use. Contact information for federal and provincial water management agencies and accredited water analysis laboratories in Saskatchewan is included.

The guide was produced by the Saskatchewan Watershed Authority, Saskatchewan Agriculture and Food, and the Saskatchewan Ground Water Association, with technical input from Agriculture and Agri-Food Canada – Prairie Farm Rehabilitation Administration, Saskatchewan Environment and Saskatchewan Health. Copies are available at www.swa.ca, or by contacting your nearest Saskatchewan Watershed Authority Regional Office.



Celebrating 40 Years of the Gardiner Dam

Forty years to the day after the South Saskatchewan River Project was completed and Gardiner Dam was officially opened, several hundred people came out to Danielson Provincial Park to celebrate the anniversary of Gardiner Dam and Lake Diefenbaker.

The 64-metre tall, 5,000 metre long Gardiner Dam was officially opened on July 21, 1967, and was named for the Honourable James G. Gardiner, the former Premier of Saskatchewan and federal Minister of Agriculture. Today, Gardiner Dam is still one of the largest earth-fill dams in the world.

The 40th anniversary celebrations included public tours of the Gardiner Dam and the Coteau Creek Hydroelectric Station, as well as a special cake cutting ceremony. Special guests at the event included a number of people who worked on the construction of the dam and several members of the Honourable James G. Gardiner's family.



Attendees were able to tour the inner working of the Gardiner Dam.

New Sign Unveiled at Native Prairie Restoration Site

This past July, officials from the Saskatchewan Watershed Authority, SaskPower, and the Native Plant Society of Saskatchewan gathered on a four-acre plot of restored native prairie in the heart of Regina to dedicate a new interpretive sign for the site.



Dale Hjertaas of the Saskatchewan Watershed Authority, Robert Stedwill of SaskPower and Garth Wruck of the Native Plant Society of Saskatchewan unveil the new interpretive sign.

The native prairie restoration project has been ongoing for several years, and was first seeded in 2003. The Saskatchewan Watershed Authority and the Native Plant Society of Saskatchewan carried out the restoration on the plot, which is located within the Wascana Centre Authority near the University of Regina. The seed used to restore this area was funded from SaskPower and taken from the Regina Plains Native Prairie Nursery located within Riverside Memorial Park.

The restoration site was seeded with 80 native prairie species such as Canada wildrye, rough fescue, green needle grass, cone flowers and gaillardia. The site will help conserve these native prairie species and their genetic diversity. It will also help raise awareness and educate residents about what the landscape looked like before settlement.

First Saskatchewan Native Prairie Curriculum Unit Released

The Saskatchewan Watershed Authority recently released the first of several curriculum units focusing on Saskatchewan's native prairie.

The native prairie units are designed to directly match the learning objectives of the Saskatchewan Core Curricula. Saskatchewan's native plants, wildlife and landscapes are included as examples for teachers to use while educating their students about plants, animals, habitats and ecosystems, giving them an increased awareness of and appreciation for Saskatchewan's prairie grasslands.

These illustrated units are being developed by a team of Saskatchewan-based educators and scientists, and are supplemented by quality environmental education programs such as Project WILD and Below Zero, Project WET, and Focus on Forests Saskatchewan. The first unit is now available at www.swa.ca/watershededucation, and more units will be released in the coming months.

National Sustainable Grazing Mentorship Project

Enhancing Profits and the Environment through Grazing Management

What is a grazing mentor?

A grazing mentor is a respected producer peer with extensive grazing management experience and knowledge. He or she can suggest grazing management options to help you improve your profits, your forage productivity and your land and water resources.

How does the project work?

The mentors visit your ranch or farm to discuss grazing resources, opportunities and challenges. They may make suggestions for grazing system design/modification and offer helpful tips for implementation. Mentors will provide peer support and continued communication to aid in decision-making and the implementation of grazing

management choices. Each mentor will be available for approximately 16 hours of mentoring.

What is the cost?

You pay \$100, and the project will cover the rest of the mentor's time and travel expenses (approximately \$600).

How do I get involved?

Contact the Saskatchewan Forage Council at (306) 966-2148 or visit www.saskforage.ca

Partners in this project include Agriculture and Agri-Food Canada through the GreenCover TAC initiative and the Canadian Cattleman's Association.

The deadline to apply for project funding under an Environmental Farm Plan or an Agri-Environmental Group Plan is fast approaching. March 2008 is the official end of both programs, which are part of the Canada-Saskatchewan Farm Stewardship Program.

Although next March is the program deadline, many of the Beneficial Management Practices available for funding assistance will have to be completed very soon. And with additional top-up funding now available for relocating livestock confinement facilities, improving farmyard runoff, or water well management projects, the time to implement your project is now!

Please contact your nearest Saskatchewan Watershed Authority office for more information, or visit us online at www.swa.ca.

Focus On:

The Upper Qu'Appelle River and Wascana Creek Watersheds

The Upper Qu'Appelle River and Wascana Creek watersheds incorporate a broad diversity of water users and water-related activities. These watersheds cover 23,443 square kilometers, and include 49 Rural Municipalities, the cities of Regina and Humboldt, 15 towns, 40 villages and 13 resort villages around Buffalo Pound Lake and Last Mountain Lake.

Together, the Upper Qu'Appelle River and Wascana Creek watersheds comprise one of the province's priority source water protection planning areas. To facilitate community-based planning, the area was organized into four planning units: Lanigan/Manitou, Last Mountain Lake, Qu'Appelle River and Wascana Creek. Representatives from these areas spent the last three years developing a source water protection plan to help sustain water quality and quantity.

These watershed residents, with assistance from the Saskatchewan Watershed Authority and other agencies, have now prepared their amalgamated *Upper Qu'Appelle River and Wascana Creek Watersheds Source Water Protection Plan*. Some highlights of this draft Plan include:

1. Aquifer and Groundwater Protection

Watershed representatives recommend an aquifer and groundwater database that lists operational and abandoned wells be compiled, and that Saskatchewan's observation well network be improved, updated and maintained. They also indicate that a groundwater database and observation well network should be developed for the Wascana Creek watershed. As well, to help protect aquifers and groundwater in the area, a groundwater management plan including aquifer-sensitivity testing programs should be developed and implemented. Information about aquifers and groundwater protection, the inter-relationships among aquifers, groundwater and recharges areas, and specific land-use practices to protect water quality and quantity in these areas must be shared with residents of the watersheds.



A water well decommissioning field day was recently held near Davin to show residents how they can protect the aquifers and groundwater in their area.

2. One-Stop Governing Agency and Information Centre

Watershed representatives want a more streamlined regulatory process through the identification and implementation of one lead agency, knowledgeable on all aspects of water-related issues including allocation and conservation, monitoring and regulation for water quality and supply, water management, fish and wildlife habitat, research, and overall planning for source water protection.

In the interim, they recommend that a comprehensive list of Saskatchewan's water-related agencies and their jurisdictions be developed and maintained, and that the list be accessible to residents. They also suggested a "one-stop" information centre be established and funded to communicate this information and to promote source water protection, including the protection of aquifers and groundwater, emergency flood management, fish and wildlife habitat protection and conservation, agricultural and wildlife needs, and economic sustainability.





Watershed Advisory Committee members learn more about their watershed while touring pilot projects for the Upper Qu'Appelle River Conveyance Improvement Project.

3. Water Conveyance Management

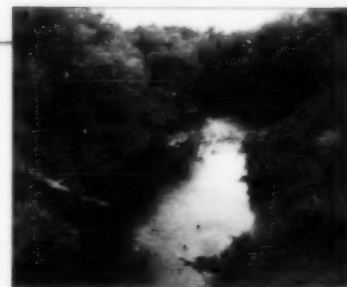
Watershed representatives recommend that water conveyance management be jointly planned with local watershed advisory or implementation committees and local, provincial and federal governments. The water conveyance plan must be environmentally sound and economically balanced. They indicated that the plan would address the timing of water flows, water level changes, sedimentation, erosion and deposition, the capacity and capability of conveyance systems, fish habitat and in-stream flow requirements, ecological impacts and developmental needs. Consideration would be given to maintaining water conveyance channels and infrastructure such as bridges, dams and waterways.

4. Zoning Bylaws

Watershed representatives recommend the Province communicate a broad understanding of the value and challenges of development planning and zoning bylaws to local administrators, council members and developers. It is suggested that a template of a development plan and zoning bylaws could be developed, incorporating items such as building codes, soil stability, effluent discharges, water collection and drainage, solid waste disposal, shoreline set-back distances, and even adjacent bylaws harmonization and surface and groundwater protection. The template could be developed by the Province in consultation with municipal organizations such as the Saskatchewan Urban Municipalities Association and the Saskatchewan Association of Rural Municipalities, and include technical and financial assistance from federal and provincial governments.

5. Communication Strategy

Watershed representatives recommend that a comprehensive communication strategy to promote understanding about source water protection and sound watershed management be developed and implemented by the Province. This strategy should include opportunities for stakeholders to participate, individually and collectively. The goals of the strategy would be to increase the public's understanding of potential water contamination sources, drainage and flood control techniques, aquifer and groundwater care, waste water and effluent management, the need to maintain natural areas, fisheries management and the overall affects of climate change. Some communication vehicles may include a website and a toll-free 24/7 telephone number.



Residents are collaborating to help protect source waters of the Wascana Creek Watershed.

6. Development and Delivery of Source Water Protection Plans

An additional key recommendation involves the Province of Saskatchewan recognizing and endorsing the implementation of the recommendations contained in the *Upper Qu'Appelle River and Wascana Creek Watersheds Source Water Protection Plan*. They also recommend the provincial government support and help expedite delivery of the various Watershed Advisory Committees' recommendations and actions for this area.

Before the *Upper Qu'Appelle River and Wascana Creek Watersheds Source Water Protection Plan* is finalized, residents of these watersheds will have several opportunities to view and further understand the recommendations and actions contained in it. Residents can provide their comments and suggestions at several "Open House" venues scheduled for January this year. It is anticipated that the Plan will be finalized and implementation will begin early in 2008. For more information about the draft *Upper Qu'Appelle River and Wascana Creek Watersheds Source Water Protection Plan*, please contact Sharon Rodenbush at (306) 787-0913.

Alfalfa: A Key Component of Effective Grazing Management

Ensuring sustained livestock production, maintaining healthy forages and providing good soil cover are all part of effective grazing management. Information on valuable components of good grazing management, including the benefits of alfalfa, was presented to Bethune area producers during a field day at Buffalo Plains Cattle Company on August 24, 2007.

The day began with an introduction by Russ Kitzinger, owner of the Buffalo Plains Feed Lot just outside of Bethune. Kitzinger explained the operation of the farm, and provided information on the tour which would follow the presentations.

Kitzinger's introduction was followed by a presentation by Bruce Chern of SVR Ranch Consulting. Chern's discussion focused on how to best use alfalfa in ranching operations, and the overall economic and environmental benefits of growing alfalfa. As well, he pointed out the benefits of growing alfalfa in short rotation, which includes free nitrogen for future crops, reduced weed problems, better soil structure and water infiltration, and improved organic matter.

The third presentation was delivered by Lorne Klein, Forage Development Specialist with Saskatchewan Agriculture and Food. Klein provided information on options for extending the grazing season. Methods of extensive winter feeding and grazing, as well as the use of portable windbreaks, snow as a water source and electric fencing were explored.

The attendees then proceeded outside for a demonstration of a solar powered water delivery system by Kelln Solar, followed by a tour of the feedlot. The highlights of the tour included two feeding areas, as well as views of the alfalfa fields.

"Due to the drought conditions of our area, alfalfa was chosen for our operation because it is long-lived and has deep roots with good tolerance against drought. With proper grazing management, alfalfa has great potential for high production," said Kitzinger.

Funding for the field day was provided

by Canada's Agricultural Policy Framework. For more information on alfalfa grazing and effective grazing management, contact:

Brett Gaube or Denis Huel
Buffalo Pound-Qu'Appelle River
Group Farm Plan Advisor
Cell: 306 529-1793
E-mail: gaubeb@sasktel.net



Russ Kitzinger, owner of the Buffalo Plains Feed Lot, discusses the feeding options used in the operation with field day attendees.



This tire trough is used as part of the feed lot's solar powered water delivery system.

R.M. of Leroy Decommissions Abandoned Water Well

An abandoned well in the Rural Municipality of Leroy was decommissioned during a recent field day.

The well had been constructed in the 1980s, but was no longer being used. During the field day, councilor Calvin Michel explained to attendees that at one time, the well had been used by farmers.

"The quality wasn't good enough for it to be used as drinking water, but farmers used it for things like spraying and for watering cattle. But it didn't fill fast enough, so now it's been abandoned," said Michel.

The R.M. instead put a water pump in the nearby dugout, so the well was no longer serving any purpose for the community. Michel says the R.M. jumped at the chance to have the well properly decommissioned.

"By having the well sealed up, that takes the pressure off the next generation who won't have to worry about the hazards of it, because it won't be there," he said.

Having the well decommissioned not only eliminates a public safety hazard, it also protects the groundwater from contamination. Hydrogeologist Kei Lo, with the Saskatchewan Watershed Authority, explains.

"Abandoned water wells that aren't decommissioned pose a contamination threat to the groundwater. When you open up a well to access the aquifer beneath the surface, you're also opening up a pathway for pollutants to enter the groundwater. Decommissioning abandoned water wells keeps that contamination from occurring."

The size, type and construction of the well are all factors in determining how a well should be decommissioned. Normally, the first step involves sterilizing the well with industrial strength bleach to kill any bacteria. But in this situation, the process had to be modified. "Because this particular well was so close to the dugout and had a direct connection to it, we couldn't use any chlorine to treat the well," says Lo.

The decommissioning began by excavating around the casing with a backhoe to roughly four feet below ground level. Bentonite chips were then poured into the well to form a one-foot plug of bentonite in the bottom.

Clay was then added until the level in the well was equal with the depth of the hole excavated around the well. The backhoe then removed the top portion of the casing and more bentonite chips were poured on top of the old column. This formed another one-foot plug of bentonite at the top of the well. Finally, more clay was added, forming a mound at the surface.

The well decommissioning demonstration was hosted by the Saskatchewan Watershed Authority, the Lanigan/Manitou Watershed Advisory Committee and the Meacham Hills Forage Club.

Lyndon Hicks, a technician with the Saskatchewan Watershed Authority, explained that anyone interested in having a well decommissioned is welcome to contact him, or any Authority office for assistance.

"Funding to assist with well decommissioning is available through the Canada-Saskatchewan Farm Stewardship Program to producers who have an Environmental Farm Plan. The Authority also has funding available through the Green Strategy to top up that assistance," says Hicks.

The deadline to apply is March 31, 2008. Producers in the Lanigan/Manitou area needing more information on the Environmental Farm Plan program can contact the advisor for the area, Nancy Gray at 946-3135 or 946-8107.



Lyndon Hicks and Kei Lo of the Saskatchewan Watershed Authority pour bentonite chips into the old well. Once wet, they form an impermeable seal, protecting the groundwater from contamination.



The top seven feet of the fiberglass well casing were removed with a backhoe.



Calvin Michel sits on the Lanigan/Manitou Watershed Advisory Committee, one of four committees working on creating a source water protection plan in the area. Here he watches as the backhoe finishes up at the former well site.

Hello Voluntary Stewards!

Thank you for taking the time to read the Fall 2007 edition of the *Prairie Update*! As always, we hope you have enjoyed the articles included in this newsletter, and we welcome any comments you have. And of course, our sincere thanks go to those who agreed to share their stories with us in these pages.

We particularly hope you enjoyed our feature on the Rutledge family and their decision to relocate their livestock corrals in order to protect their source of drinking water. With the deadline to apply for funding through an Environmental Farm Plan or an Agri-Environmental Group Plan approaching fast, we encourage producers to take full advantage of this funding and complete their projects as soon as possible. And remember, additional funding is now available through Saskatchewan's Green Strategy for implementing projects to control farm runoff, to relocate livestock facilities, or to protect water wells.

You can find more information on the Saskatchewan Watershed Authority's Prairie Stewardship Program in back issues of this newsletter. These issues, as well as interactive maps featuring other stewardship project demonstration sites, can be viewed on our website at www.swa.ca.

Angela Bethune

Paul Chomos

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Share Your Ideas!

If you have comments or ideas about this newsletter, please contact:

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Paul Chomos at (306) 694-3017 or

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Ryan Lorge at (306) 787-6958 or

e-mail ryan.lorge@swa.ca.

For information about the Prairie Stewardship Program please contact:

Jennifer Lohmeyer at (306) 787-8707 or

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Coming Events

For more information, please contact the following staff members in the office nearest you:

North Battleford	Jeremy Brown	446-7460
Regina	Etienne Soulodre	787-0661
Swift Current	Krista Connick Bob Springer	778-8280 778-8301
Weyburn	Amy Woodard	848-2354
Yorkton	Jason Puckett Lyndon Hicks	786-5845 786-1496